Microvita and the Spectrum of the Primary Colors

The microvitic origin of color perception, a first hint of evidence?

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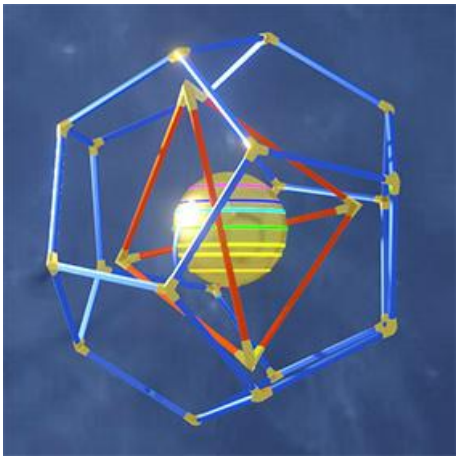

The distinct pattern of the primary colors in the visible spectrum, which every child can see but no physicist can define or detect, is precisely predicted by the symmetry relations underlying our connection with the universe. The hidden geometries of the invisible (unconditional, non-local, universal) and visible (conditional, local, personal) creation spaces, each time they align, are found to accurately map the wavelength of one of the primary colors, thus proving their existence based on clear and direct evidence. It is quite literally the geometry of creation in plain sight! In this essay the main principles are viewed in the light of P.R. Sarkar's microvita theory, with some non-technical connections to quantum physics.

Tanmatra's: a different take on waves

Those who take an interest in studying microvita theory in some depth will certainly recall P.R. Sarkar's concept that *"microvita are carried by tanmatra's"* [1]. Tanmatra literally means *"smallest portion of that (fundamental factor)"* [2], and more congenially it means a sensory inference, like sound or light. As, at least in part, it involves actual perception, tanmatra is not the same a plain physical wave - after all we hear sound and see colors and so forth, we don't hear or see or smell waves. So clearly, besides its energy and vibration, this adds yet another dimension to a wave, that of perception, which a physicist can neither describe nor measure. This is curious in a way, because after all it is only and alone through our perceptions, that is, through tanmatra's, that we can know the world including our own body.

More abstractly, tanmatra's, and generally all vibrations, represent an idea, rather than a thing: *"Every vibration in this universe has color and sound. Every vibration also represents a particular idea, and hence each idea has a vibrational sound and vibrational color".* - P.R. Sarkar [3].

The action principle in waves and tanmatra's

While not actual perception, in physics, and especially in quantum physics, a third quality or aspect of waves, besides its energy and vibration is known, and this is called ***"action".*** It is not action like in an action movie, but a special, well defined concept in physics, which in a sense integrates or captures an entire motion or path of, for example, a particle, as it moves from A to B, in one single number. Also a wave has an action, as per the Planck-Einstein relation: ***E = hf***, where ***E*** is the energy, ***f*** is the frequency, and ***h*** is the action, in this case the actual quantum of action, the Planck Constant. The concept of action, resp. Principle of Least Action, allows complex processes in nature to be described with relative ease. The action principle is widely used, yet somewhat mysterious - it is sometimes thought of as having a teleological character [4], although this is disputable, it shows its rather profound nature.

In other words, could it be, by way of educated guess, that the action of a wave could have something to do with its perceptual quality? That is to say, could the action of the wave be "green" or "orange"? This must obviously be an oversimplification, as after all the action, that is in the case of light waves, the Planck Constant is, well, constant - it indicates essentially a simple proportionality relation between the energy and the frequency of a wave: **h = E/f**.

So, clearly the action of the wave in and of itself is not likely to convey information of perceptual nature - it is neutral in that regard. What is obviously needed is a different type of action, one that involves perception, that is verily a ***tanmatric action***. The latter is the subject of this essay, implying nothing less than the proposed microvitic origin of color perception.

In order to describe a tanmatric action in terms of physics, we recall that tanmatra implies not only the propagating aspect of a wave and its expressed energy, but also its perception, and for that matter, its generation. The standard action, as described, only concerns the propagation. The action associated with its generation and perception is proposed to be of a different nature, more closely associated with the **angular momentum** and **potential energy** of the matter waves that generate and absorb a photon [5].

This means that in tanmatric terms, there are at least 2 discernible actions associated with the wave, one associated with its expressed energy, the other with its potential energy. If the two are balanced, they form a wave, which can be associated with a 3rd form of action.

Microvita and action

In microvita theory, ***"Krta Purusa"*** is the Action Principle, and microvitum is its smallest instance. Vice versa, *"Krta Purusa is the concentrated form of microvita"* [1]. Hence, as there are 3 types of action associated with a tanmatra it is not surprising that there are 3 types of microvita: "positive" (pro-mind, associated with the potential energy), "neutral" (associated

with expressed energy) and "negative" (pro-matter, associated with vibration) [5]. However, like in physics there is essentially only one action principle, similarly in microvita theory: *"In principle, negative and positive microvita are the same, but their field of activity is different"* [6].

Waves, sub-waves and their symmetry principles

It is the angular nature of the action associated with the generation and perception of tanmatra's that is thought of as the cause of the distinct spectrum of the primary colors. Clearly the latter is entirely perceptual - there is no known physical principle that can discern primary colors based on the detectible wavelength or energy alone. With regard to the angular aspect we consider another concept introduced by Sarkar: *"Inferences are the major waves, but sub-waves are created in them by moving microvita. The major waves function as the controlling waves for the sub-waves"* [7].

The main wave is most closely associated with the expressed energy, the sub-waves with the potential energy en hence also, with the angular momentum of the matter wave. If there are *"moving microvita",* this indicates that some form of equilibrium is formed between the main wave and the sub-waves, that is, between the measurable wave and its perception, in this case as a color. In other words, with the help of positive microvita, waves are perceived as colors (resp. other inferences) when they enter a suitable material structure.

In microvita theory, ***"Jina Purusa"*** means energy but also Knowing Principle. Virtually the same is known in physics, in this case as the practical equivalence between conservation laws and symmetry - this is Noether's Theorem. The symmetry aspect mapping, in this case, the main waves, and thus their conserved energy, is known as gauge theory. A complementary symmetry principle is proposed for the sub-waves. This is not detailed further here, it suffices to say that it is closely related to the scalar field in physics.

Thus, in synopsis, two complementary symmetry principles and their geometrical representation are introduced: one primarily associated with Jina Purusa, and one with Krta Purusa - in other words, one with Energy resp. Knowing Principle, the other with microvita.

The spectrum of the primary colors

It is the interaction, and especially the alignment between these "external and internal" symmetries resp. geometries, one for the main waves and one for the sub-waves, that demonstrably and accurately produces the exact spectrum positions of the primary colors. Somewhat congenially, when the symmetries of the visible and invisible creation spaces are geometrically aligned, this alignment obviously causes a somewhat enhanced perception, and the latter is known as a primary color. In other words, while conscious perception is theoretically of microvitic nature, this can in no way be proven or verified. Nevertheless, the

geometrical alignment of the detectible and the perceptual modes gives away something of the truly macrocosmic factor that underlies and guides our perceptions.

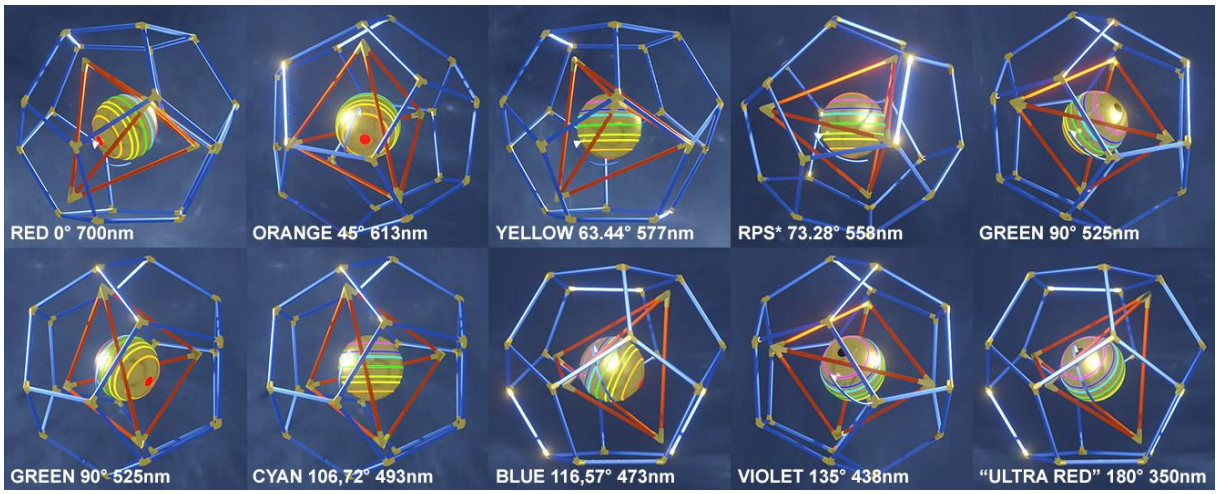

Fig. 1. *Gallery showing the "ideal" cardinal angles and corresponding wavelengths. The white pointer indicates the color on the sphere and is stationary with respect to the dodecahedron.*

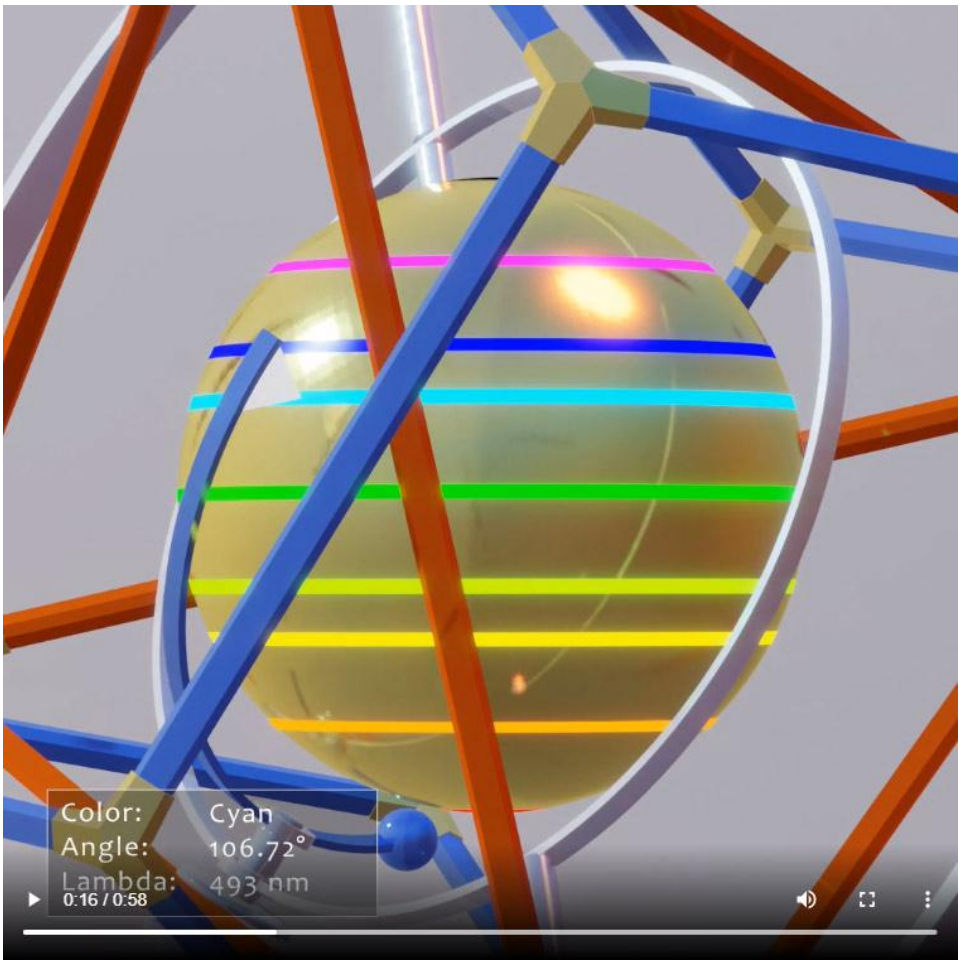

fig. 2. Detail

THE GEOMETRY OF COLOURS					
Coupling Angles		consensus central wave length (nm) 1,2)	Colours		
Pentagonal angles	Lateral angles		Name	P/S/T*	example
(180.0)			"Ultra Red"	"P"	
	135.0	420; 400	Violet	S	
116.565..		470; 475	Blue	P	
	106.717..			T	
	90.0	530; 510	Green	S	
	73.283..			T	
63.435..		580; 570	Yellow	P	
	45.0	620; 590	Oranje	S	
0.0		700; 650	Red	P	

wavelength sources resp.
1) http://en.wikipedia.org/wiki/Color
2) http://eosweb.larc.nasa.gov/EDDOCS/Wavelengths_for_Colors.html
*Primary / Secondary / Tertiary
63.435.. = atn(2);73.283..=60+45-atn(1/Phi)
106.717..=120-45+atn(1/phi); 116.565.. = Pi-atn(2)
"Ultra red" (UR) is the higher octave Red (trad. UV) at virtual 180°, mixing with Blue to form Violet

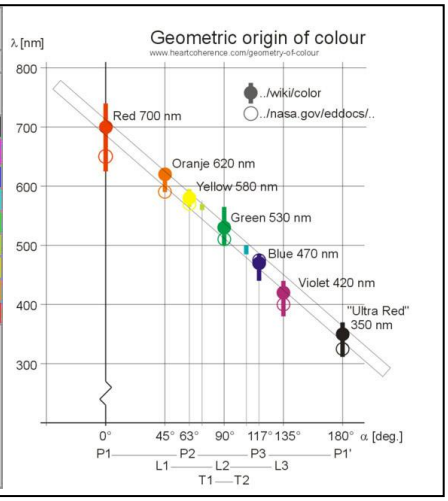

*Fig. 3. Angle - wavelength - color table and graphic: λ ≈ 700 - θ / 180 * 350 nm.*

Tanmatra's in the macrocosmic picture

P.R. Sarkar's Microvita Cosmology is also known as the ***"Four Chambers of the Universe"***. What has been presented here is a "Four Chambers" approach of sensory inferences, that is, tanmatra's, namely:

(A) Subjective = Expressed energy of the tanmatra; associated with neutral microvita
(A) Objective = Potential energy, also propensity; associated with positive microvita
(B) Subjective = Action Principle, resp. concentrated form of microvita itself
(B) Objective = Vibration; associated with negative microvita

In present day physics all these four faculties are essentially known, and in some fashion or another form the framework of the most notorious quantum physics equations, however there is no distinct symmetry principle associated with sub-waves. More technically, it is proposed that the same principle that gives mass to elementary particles (the Higgs mechanism), is also involved in creating and maintaining structural equilibrium in and of space and time [5]. This concept is not known in physics today. In the present context, another name for microvita could also be "autopoietic action".

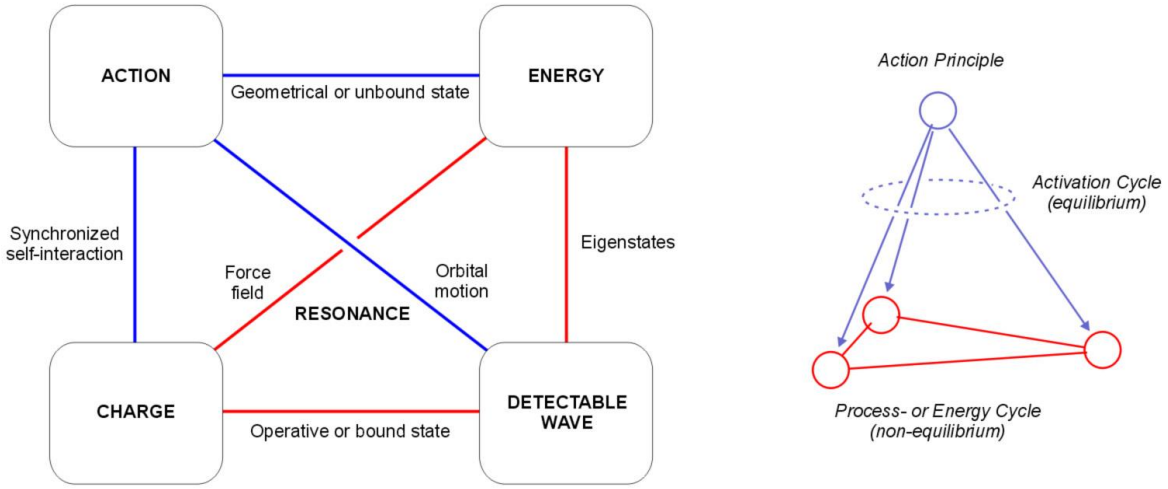

Fig. 4. The Four Chamber model and its tetrahedral representation [5].

Perhaps that the new line of thinking introduced through P.R. Sarkar's microvita theory, along with applications or implications such as the geometric alignment of the primary colors, could create new viewpoints and help solve long standing issues and incompleteness in quantum physics.

References:

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